IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

DN 801001	) Group Art Unit: 2171
	)
In re the Application of:	) Examiner: Cam-Linh Nguyen
	)
Jeffrey P. Szmanda	) Administrative Patent Judges:
	)
Appeal No.: 2007-0220	) James D. Thomas
	) Joseph F. Ruggiero
Serial No.: 09/982,640	) Allen R. MacDonald
	)
Filed: 10/18/2001	)
	)
For: A Method of Retrieving Advertising	)
	)
Information and Use of the Method	)

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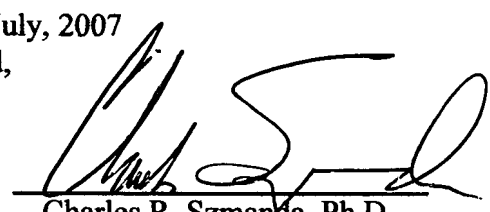BOARD OF PATENT APPEALS
AND INTERFERENCES

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United States Patent and Trademark Office
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Request For Rehearing Transmittal

1. Request for Rehearing.

2. Copy of (IEEE 100 The Authoritative Dictionary of IEEE Standard Terms, Seventh Edition, IEEE Press. 2000 (p. 268))
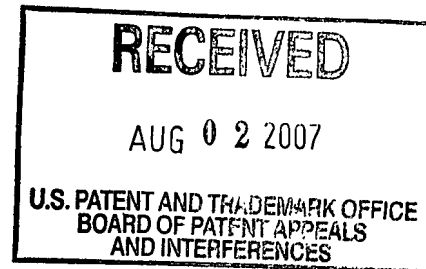
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Dated this 31st day of July, 2007
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Request For Rehearing

This request for rehearing is in response to the decision of the Board in the above entitled appeal, dated 31 May, 2007. In affirming the Examiner's rejections, the Board appears to have made a new ground of rejection of the claims under appeal, or, at the very least, a new rationale raised with respect to the independent claims of this application. In particular, while noting that "the prior art describes a different descriptive material than the claim[s]," the Board alleged that certain elements of the appealed claims are "non-functional descriptive material" and declined to give "patentable weight" to "the meaning relating to facts about an advertisement and/or details of a plurality of advertisements," and stated that such meaning "cannot be used to distinguish the claimed invention from prior art data/facts/details."

Rejections based on the above arguments had not been made previously by the Examiner with respect to the independent claims involved in the instant appeal. Accordingly, Appellant has never had a fair opportunity to respond to these new arguments. Based on what he believes to have been misapprehended or overlooked by the Board, Appellant therefore respectfully requests rehearing under 37 C.F.R. §41.52, so that a proper response to the above and other arguments made by the Board can be presented. Appellant's arguments begin on page 2 of this paper.

ARGUMENTS

Appellant continues to assert the patentability of all of the claims and stands by the arguments in the principal and reply briefs, incorporated here by reference. However, major emphasis in this paper is placed on the "printed matter" and "no patentable weight" doctrines which will be addressed by Appellant for the first time. For the sake of brevity, Claim 1 of Appellant's application is reproduced here as exemplary:

> **Claim 1.** A method of supplying advertisement information to a user searching for said information within a data network, comprising the steps of: receiving from the user, a series of search rules comprising facts about an advertisement; accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search rules to said database; and reporting, to the user, results comprising a subset of the contents of said database.

The Examiner relied on the following documents to establish anticipation:

Loeb	US 6,421,652 B2	16 July, 2002
		(Filed 27 July, 1999)
Skillen	US 6,098,065	1 August, 2000

In affirming the Examiner's rejections, the Board did not cite any instance wherein either of the users represented in Skillen or Loeb provide "a series of search rules comprising facts about an advertisement." Further the Board did not argue that the above cited documents disclose or fairly suggest "a database comprising details of a plurality of advertisements." Indeed, the references relied upon do not so disclose and the Board appears to have so acknowledged.

The disclosures in the above cited documents are in no way sufficient to sustain the anticipation or obviousness rejections of record. As noted by Appellant in the primary brief, the Federal Circuit has articulated the standard for anticipation on numerous occasions, such as in *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987): "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference [emphasis added]." Further, anticipation cannot be established where the general subject matter is the same but the specific application or use is different, as explicated in *Union Oil Co. of California v. Atlantic Richfield Co.*, 208 F.3d 989, 54 USPQ2d 1227 (Fed Cir. 2000), cert denied, 531 U.S. 1183 (2001).

The selected subject matter of Appellant's claims cannot logically or legally be denied patentable weight.

In affirming the Examiner's rejections, the Board has relied on two distinct but related theories which, in effect, would improperly strip the claim of certain subject matter by designating it as "printed matter" or "non-functional descriptive material" and then giving that subject matter "no patentable weight." The opinion of the Board states explicitly that "[t]he PTO may not disregard claim limitations comprised of printed matter." However, under the above-cited doctrines, the claim is inevitably mutilated in such a way as to remove the distinguishing material from consideration. The claim is then rejected as being either anticipated (because it is "only allegedly different" from the referenced document) or judged to be obvious in view of the referenced document. The Board's position on this issue was summarized as thus:

> We conclude that when the prior art describes all the claimed structural and functional relationships between the descriptive material and the substrate, but the prior art describes a different descriptive material than the claim, and then the descriptive material is nonfunctional and will not be given any patentable weight (Decision on Appeal at pp. 3-4).

The reference to structure and "the substrate" indicates that the Board analyzed Appellant's claims as if they were directed to an article of manufacture. Appellant stresses that the instant claims are directed to methods. Claims directed to methods and articles of manufacture reside in separate statutory classes as set forth in 35 U.S.C. §101. Accordingly, any proper discussion of functionality in a method claim must explore the relationship between the subject matter and the steps or acts recited in the claim and not the structure of the "substrate," which would apply for claims directed to articles of manufacture. The case law cited by the Board and discussed infra must be analyzed in accordance with the statutory class of the claims under appeal so as to ascertain the way in which these citations may pertain to the claims of Appellant's application.

That a "database" is recited in the body of the present method claims does not render the claims subject to the rules of interpretation of article of manufacture claims. The term "database" is defined as:

> A collection of logically related data stored together in one or more computerized files. *Note:* Each data item is identified by one or more keys." (IEEE 100 The Authoritative Dictionary of IEEE Standard Terms, Seventh Edition, IEEE Press. 2000 (p. 268)) [Copy enclosed]

As such, a "database comprising details of a plurality of advertisements" is structured so as to be searched using a search engine; into which has been input "a series of search rules comprising facts about an advertisement." The user does not merely receive a listing of the contents of the database but receives "results comprising a subset of the contents of said database." This is based on the search performed in accordance with the intended purpose of the claimed method. The database is not claimed *per se* as an article of manufacture. Rather, the database is claimed as a part of the method and functions in connection with the operation of the method.

Consistent with the method described above, the Supreme Court, in *Cochrane v. Deener,* 94 U.S. 780 (1876) states, in pertinent part:

> If one of the steps of a process be that a certain substance is to be reduced to a powder, it may not be at all material what instrument or machinery is used to effect that object, whether a hammer, a pestle and mortar, or a mill. Either may be pointed out; but if the patent is not confined to that particular tool or machine, the use of the others would be an infringement, the general process being the same. <u>A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing</u> [Emphasis added].

Mr. Cochrane was the inventor of a process (disclosed and claimed in US reissued patent 5841) for manufacturing flour. The single claim in his patent reads as follows:

> The …process for manufacturing flour from the meal of ground wheat, [made] by first taking out the superfine flour, and then taking out the pulverulent impurities by subjection to the combined operations of screening and blowing and afterward regrinding and re-bolting the purified middlings.

To paraphrase the Board's Decision on Appeal in relation to the cited case, the patentability of Mr. Cochrane's invention was predicated to be based upon the characterization of the grist, namely the "purified middlings" per se not to any variations or improvements or novelty associated with the milling processes set forth in [his] process (or method) claim. In other words, the improvement is directed to the use of "purified middlings" in a conventional milling process. The use of the "purified middlings" constituted <u>the</u> improvement in milling processes over those used previously in which raw wheat was milled. The "purified middlings" could not have been functional as grist until they were a part of the regrinding and re-bolting processes; at which point, they functioned as the intended improvement. That functionality was not predicated on the "purified middlings" changing the actual steps performed in the grinding process. Rather, the improvement resided in the specific nature of the grist.

In the instant case, "a database comprising details of a plurality of advertisements" is functional when it is actually operating in the method. In like manner, "a series of search rules comprising facts about an advertisement" is functional when the search rules are used by the search engine to "apply said search rules to said database."

In the words of the Cochrane decision, the instant method "is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts [receiving from the user, a series of search rules comprising facts about an advertisement; accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search rules to said database...], performed upon the subject-matter to be transformed ["a database comprising details of a plurality of advertisements"] and reduced to a different state or thing [results comprising a subset of the contents of said database]."

By any logical criterion or set of criteria, all of the subject matter of Appellant's Claims, illustrated by Claim 1, is entirely functional, based on the relationship between the subject matter and the steps recited in the claim. Such subject matter is, therefore, entitled to receive patentable weight.

In what follows, Appellant presents arguments concerning the case-law cited by the board.

The case law, cited in the Board's opinion, supports the patentability of Appellant's claims.
In its opinion, the Board cited four cases, namely, *In re Gulack,* 703 F.2d 1381,217 USPQ 401 (Fed. Cir. 1983); *Diamond v. Diehr,* 450 U.S. 175, USPQ 1, 10 (1981); *In re Lowry,* 32 F.3d 1579,32 USPQ2d 1031 (Fed Cir. 1994); *In re Ngai,* 367 F.3d 1336,70 USPQ 1862 (Fed. Cir. 2004) hereinafter referenced as "Ngai." The cited cases will be discussed by Appellant, each in its turn.

When considered in accordance with the statutory class of Appellant's claims, the ruling in Gulack supports the patentability of Appellant's claims. At the outset, Appellant believes it to be significant that the Federal Circuit panel noted the following:

> A "printed matter rejection" under §103 stands on questionable legal and logical footing. Standing alone, the description of an element of the invention as printed matter tells nothing about the differences between the invention and the prior art or about whether that invention was suggested by the prior art.

The Court admonished further:

> Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter. Under section 103, the board cannot dissect a claim, excise the printed matter from it, and declare the remaining portion

of the mutilated claim to be unpatentable. The claim must be read as a whole. [Citations omitted.]

The Gulack case is dissimilar to the instant case in that the claim in Gulack was to an article of manufacture, not a method. In that context the Court articulated the following:

> Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability. Although the printed matter must be considered, in that situation it may not be entitled to patentable weight. This, apparently, was the board's conclusion with respect to Gulack's invention.

Notwithstanding the foregoing, the Court in Gulack reversed the decision of the Board based on the functional relationship between the "printed matter" and the "Educational and Recreational Mathematical Device in the Form of a Band, Ring or Concentric Rings" of Gulack's invention.

Two points should be made with respect to the relationship between Gulack and the instant case: (1) A functionality analysis must be performed in accordance with the statutory class of the claims under appeal; and (2) the limitations alleged to contain "non-functional descriptive material," namely "receiving, from the user, a series of search rules comprising facts about an advertisement" and "a database comprising details of a plurality of advertisements" and (presumably) "results comprising a subset of the contents of said database" is not designated properly as "printed matter," per Lowry, discussed infra.

The central point is that the alleged printed matter is related to the steps or acts performed in the method. Such is the case in at least two ways: (1) the database of Appellant's claims is structured so that it can be searched by a search engine and (2) the result of the search by the search engine depends on the "facts about an advertisement," input by the user, as well as the contents of the database comprising details of a plurality of advertisements. Indeed, all of the elements of Claim 1 function together to yield the desired result, Figure 1 (at least) of Appellant's application.

Regarding Gulack's invention, the Court noted that...

> [...t]hese digits are related to the band in two ways: (1) the band supports the digits; and (2) there is an endless sequence of digits — each digit residing in a unique position with respect to every other digit in an endless loop. Thus, the digits exploit the endless nature of the band.

The band of Gulack's invention (the substrate) is structurally related to the "printed matter" content; as would be appropriate for a claim directed to an article of manufacture. Assuming, for the sake of

argument, that the content of the database and input from the user of Appellant's invention can properly be characterized as "printed matter," the subject matter relating to "facts about an advertisement" and "details of a plurality of advertisements" functions within the process by interacting with the steps or acts performed. When applied properly, an analysis of functionality renders the limitations of Appellants claims entirely functional. The alleged "non-functional descriptive material," therefore, cannot properly be so designated and, therefore, must be given patentable weight.

The Lowry case distinguishes clearly between "printed matter" and information to be processed not by the mind, but by a machine, the computer. Appellant's case is supported by Lowry because the designation of "non-functional descriptive material" based on the printed matter doctrine is inappropriate. As the Court noted in Lowry:

> This case, moreover, is distinguishable from the printed matter cases. The printed matter cases "dealt with claims defining as the invention certain novel arrangements of printed lines or characters, useful and intelligible only to the human mind." *In re Bernhart*, 417 F.2d 1395, 1399, 163 USPQ 611, 615 (CCPA 1969). The printed matter cases have no factual relevance where "the invention as defined by the claims requires that the information be processed not by the mind but by a machine, the computer. [Emphasis in original]"

Appellants recited "database comprising details of a plurality of advertisements" and the use of "a series of search rules, comprising facts about an advertisement" by a "search engine" requires that the information must be processed on a computer, based, at least, on the definition of the term "database," supra, and on the user being depicted as searching for said information "within a data network."

Since the search is being conducted by a machine, the printed matter doctrine has no factual relevance with regard to Appellant's claims. Accordingly, for at least this reason, the designation of features of Appellant's claims as "non-functional descriptive material," based on the printed matter doctrine, is not proper. Therefore, all of the limitations of Appellant's claims are entitled to be accorded patentable weight.

When considered in accordance with the statutory class of Appellant's claims, the ruling in Ngai is consistent with the patentability of Appellant's claims. Dr. Ngai invented "a method for normalizing and amplifying an RNA population" that used known biochemical reagents to accomplish the recited task. Ngai submitted claims drawn to a "method" as well as claims drawn to a "kit," including the necessary reagents and a set of instructions. The claims drawn to the method as well as one of the

claims to a kit were allowed by the USPTO. The remaining claim, found unpatentable by the Court, read as follows:

> A kit for normalizing and amplifying an RNA population, said kit comprising instructions describing the method of claim 1 and a premeasured portion of a reagent selected from the group consisting of: oligo dT biotinylated primer, T7 RNA polymerase, annealed biotinylated primers, streptavidin beads, polyadenyl transferase, reverse transcriptase, RNase H, DNA pol I, <u>buffers</u> and nucleotides. (emphasis added).

In its opinion, the Court noted that Ngai admitted that a kit containing the "buffers" in the Markush listing could be found in the referenced prior art. The Court rejected Ngai's assertion that the "instructions" distinguished the kit over the teachings of the reference. The Court also noted that Ngai's method claims had all been allowed – and properly so.

The proper allowance of Ngai's method claims is entirely consistent with Appellant's case. Interestingly, the more apt analogy to Appellant's "database comprising details of a plurality of advertisements" is <u>not</u> Ngai's instruction manual but the "message RNA (mRNA)" that is recited in method Claim 1. mRNA contains the information necessary for generating a protein sequence or, as in Ngai's Claim 1, for coding a sequence of nucleic acids in "single stranded (ss) cDNA." Indeed, one might well describe Ngai's mRNA as a "database" comprising the information necessary to code a (ss) cDNA sequence. Such a database would be "read" by, *inter alia*, RNA transferase or RNA transcriptase.

Ngai's claims to a "kit," have little or no factual relevance to the present case, at least because (1) Appellant's claims are drawn to a method, wherein the type of information in the database is indeed connected to the steps recited in the method and (2) while Ngai's printed instructions in the rejected claim, may qualify as printed matter, Appellant's "database comprising details of a plurality of advertisements" does not qualify as printed matter, based on the ruling in Lowry.

Accordingly, <u>all</u> of the limitations of Appellant's claims are entitled to be accorded patentable weight.

When the limitations of Appellant's claims are properly given patentable weight, the correlations proffered by the Board fail to disclose or suggest <u>all</u> of the limitations in the claims of the instant application.

As noted above, Appellant believes that the claims of the instant application are patentable. In Appellant's view, the Board errs when it removes or eliminates from consideration the distinguishing limitations of Appellant's claims by declaring the subject matter presented therein to be "non-functional" and according no patentable weight or significance to them. With respect to the other independent claims of the application, Claims 11, 25, 39 and 42, once the distinguishing matter is extracted or eliminated from consideration, the claims cannot function as intended. It therefore makes no sense to argue the patentability or non-patentability of the mutilated claims. The same argument can be advanced for the dependent claims under appeal.
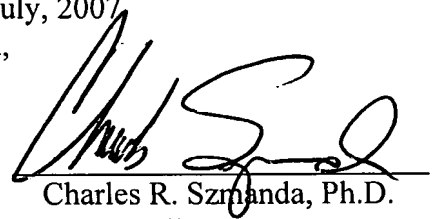
With respect to Claims 39 and 42, Appellant feels compelled to point out again that he has the right to be his own lexicographer as noted in the primary brief. Accordingly, the Board's attempted identification of connotation with the term "context" (page 6 of the Board's decision) is incorrect both factually and legally. The "contextual database" of Skillen, as specified, "typically contains information relating to the Internet, for instance, keywords associated with respective WWW site locations." (Column 4, lines 11-13) This in no way corresponds to Appellant's definition of the term connotative (Appellant's specification at paragraph 18). Indeed, placing a word in "context" tends to strip its connotative meaning. For example, the word "babe" in the context of maternity limits the meaning of the word to its denotative meaning of infant or small child.

The relationship between connotation and demographics is also outlined and defined in Appellant's specification at paragraphs 18-19. The depiction of "various demographics information" (Board's opinion at pages 8-9) as being somehow inferred from the presence of a "consumer database" as seen in Loeb still does not teach or fairly suggest "connotative significance to a targeted demographic segment" arranged as in claims 39 and 42. See *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001). To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. The teachings of columns 11-12 of Loeb refer to a "consumer database." The instant claims, however depict a user submitting terms having "targeted connotative significance to a targeted demographic segment" and using a search engine to search a "database comprising details of a plurality of advertisements." A "certain marketing analysis (Board's opinion at page 9)," supposedly taught in column 11, does not describe what is in the claims.

Conclusion

The features of Appellant's method claims are entirely functional because they operate within the recited methods to produce the desired results. Accordingly, all of the features of Appellant's claims are entitled to be accorded patentable weight. Because the Skillen and Loeb Documents fail to teach or suggest all of the features of Appellant's claims, it is respectfully submitted that Appellant's claims are allowable over the documents of record.

Dated this 31st day of July, 2007,
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(6) Representations of static or dynamic entities in a formalized manner suitable for communication, interpretation, or processing by humans or by machines.

(SCC32) 1489-1999

data abstraction (A) (software) The process of extracting the essential characteristics of data by defining data types and their associated functional characteristics and disregarding representation details. *See also:* encapsulation; information hiding. **(B) (software)** The result of the process in definition (A). (C) 610.12-1990

data-access operation A processor-initiated load, store, or lock that involves a data-format copy and (for lock operations) a data-update action (such as swap or add).

(C/MM) 1596.5-1993

data access register A register that is used for arithmetic associated with random-access of data. (C) 610.10-1994w

data acquisition (supervisory control, data acquisition, and automatic control) (station control and data acquisition) The collection of data.

(SWG/PE/SUB) 999-1992w, C37.1-1994, C37.100-1992

data acquisition system (1) (supervisory control, data acquisition, and automatic control) (station control and data acquisition) A system that receives data from one or more locations. *See also:* telemetering. (PE/SUB) C37.1-1994 **(2)** A centralized system that receives data from one or more remote points—a telemetering system. Data may be transported by either analog or digital telemetering.

(SWG/PE) C37.100-1992

data administrator An individual who is responsible for the definition, organization, supervision, and protection of data within some organization. *See also:* database administrator.

(C) 610.5-1990w

data aggregate A collection of two or more data items that are treated as a unit. *Synonyms:* aggregate; group item. *See also:* composite data element. (C) 610.5-1990w

data attribute A characteristic of a unit of data.

(C) 610.5-1990w

data bank (A) A collection of data libraries. *Note:* A record contains one or more items, a file contains one or more records, a library contains one or more files, and a data bank contains one or more libraries. **(B)** A collection of data relating to a particular subject area. *Note:* The data may or may not be machine-readable. (C) 610.5-1990

data bar polling An end-of-write indicator. (ED) 1005-1998

database (DB) (1) (A) (data management) (software) A collection of logically related data stored together in one or more computerized files. *Note:* Each data item is identified by one or more keys. *See also:* database management system. **(B) (data management) (software)** In CODASYL, the collection of all the record occurrences, set occurrences, and areas controlled by a specific schema. (C) 610.5-1990 **(2)** A collection of data fundamental to a system.

(C/SE) 1074-1995s

(3) A collection of related data stored in one or more computerized files in a manner that can be accessed by users or computer programs via a database management system.

(C/SE) J-STD-016-1995

(4) A collection of interrelated data, often with controlled redundancy, organized according to a schema to serve one or more applications; the data are stored so that they can be used by different programs without concern for the data structure or organization. A common approach is used to add new data and to modify and retrieve existing data.

(C/DIS) 1278.4-1997

database access method A technique for organizing and storing a physical database in computer storage. (C) 610.5-1990w

database administration (DBA) The responsibility for the definition, operation, protection, performance, and recovery of a database. (C) 610.5-1990w

database administrator (DBA) An individual who is responsible for the definition, operation, protection, performance, and recovery of a database. *See also:* data administrator.

(C) 610.5-1990w

database command language (DBCL) A procedural data-manipulation language used to access a database through a database management system. *See also:* database manipulation language. (C) 610.5-1990w

database creation The process of naming, allocating space, formatting, and defining a database. *See also:* database definition; database design. (C) 610.5-1990w

database definition (A) The process of translating a conceptual schema for a database into a data storage schema. *See also:* redefinition; database design; database creation. **(B)** The result of such a translation. (C) 610.5-1990

database description language (DBDL) *See:* data definition language.

database design (A) The process of developing a conceptual schema for a database that will meet a user's requirements. *Synonym:* implementation design. *See also:* database creation; database definition. **(B)** The result of the process in definition (A). (C) 610.5-1990

database engine A software engine that is specially designed for database applications; performs low-level database operations such as record creation, editing, and deletion. *See also:* relational engine. (C) 610.10-1994w

database extract A file, each record of which contains data items selected from a database based on a particular criterion.

(C) 610.5-1990w

database integrity The degree to which the data in a database are current, consistent and accurate. *See also:* data integrity; database security; integrity. (C) 610.5-1990w

database key A field in a database that identifies a record in that database. (C) 610.5-1990w

database management system (DBMS) (1) A computer system involving hardware, software, or both that provides a systematic approach to creating, storing, retrieving and processing information stored in a database. A DBMS acts as an interface between computers' programs and data files as well as between users and the database. It may include backup/recovery, checkpoint processing, and ad-hoc query capability.

(C) 610.5-1990w

(2) An integrated set of computer programs that provide the capabilities needed to establish, modify, make available, and maintain the integrity of a database.

(C/SE) J-STD-016-1995

database manipulation language (DBML) *See:* data manipulation language.

database organization The manner in which a database is structured; for example, a hierarchical organization, a relational organization. *See also:* reorganization.

(C) 610.5-1990w

database record (A) A collection of data elements that are stored in a database. *See also:* record. **(B)** A collection of hierarchically dependent segments (one root and all its descendants) within a hierarchical database. *See also:* record.

(C) 610.5-1990

database reorganization *See:* reorganization.

database security The degree to which a database is protected from exposure to accidental or malicious alteration or destruction. *See also:* database integrity; data security.

(C) 610.5-1990w

database segment *See:* segment.

database server On a network, a server that provides access to a database at the record level; that is, the server sends and locks only the records affected by a particular requestor. *See also:* file server; disk server; mail server; terminal server; network server; print server. (C) 610.7-1995

database sublanguage *See:* data sublanguage.

database system A software system that supports multiple applications using a common database. (C) 610.5-1990w

Database Task Group (DBTG) A task group of the CODASYL Programming Language Committee that established a set of standards for specification and design of network database structures. *See also:* CODASYL database.

(C) 610.5-1990w